Louisville Metro Air Pollution Control District

850 Barret Ave., Louisville, Kentucky 40204
13 September 2014

Federally Enforceable District Origin Operating Permit Statement of Basis

Company: Ernst Kentucky, LLC – Downtown Plant

Plant Location: 4121 Algonquin Parkway, Louisville, Kentucky 40211

Date Application Received: 22 March 2010 **Date Admin Complete:** 22 May 2010
3 March 2014
Date of Draft Permit: 13 September 2014 **Date of Proposed Permit:** 13 September 2014

District Engineer: Bob Wesely **Permit No:** 27843-14-F

Plant ID: 1293 **SIC Code:** 3273 **NAICS**: 327320 **AFS:** 01293

Introduction:

This permit will be issued pursuant to District Regulation 2.17- *Federally Enforceable District Origin Operating Permits*. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), 1 hr and 8 hr ozone (O_3), and particulate matter less than 10 microns (PM_{10}); is a non-attainment area for particulate matter less than 2.5 microns ($PM_{2.5}$); and partial non-attainment area for sulfur dioxide (SO_2).

Application Type/Permit Activity:

[X] Initial Issuance

[ ] Permit Revision
- [ ] Administrative
- [ ] Minor
- [ ] Significant

[ ] Permit Renewal

Compliance Summary:

[ ] Compliance certification signed
[ ] Compliance schedule included
[ ] Source is out of compliance
[X] Source is operating in compliance

I. Source Information

1. Product Description: Ernst Kentucky, LLC – Downtown Plant is a truck mix (dry) ready mix concrete production facility, consisting of a single truck mix (dry) ready mix concrete batch plant.

2. Process Description: At the concrete ready mix plant, the dry components of concrete (cement, flyash, sand, and aggregate) are measured and loaded with water into ready mix concrete mixer/transit trucks and the ready mix concrete is transported to offsite delivery locations.

3. Site Determination: There are no other facilities that are contiguous or adjacent to this facility

Emission Unit Summary:

Emission Unit	Equipment Description
U1	One (1) Johnson Ross truck mix (dry) ready mix concrete batch plant, with one (1) cement silo and one (1) flyash silo, one (1) outside aggregate/sand conveyor for loading overhead aggregate/sand bins, and four (4) baghouse dust collectors.

4. Fugitive Sources: The fugitive sources identified by the source are uncontrolled portions of the ready mix concrete unit.

5. Permit Revisions:

Revision No.	Issue Date	Public Notice Date	Type	Attachment No./Page No.	Description
Initial	10/__/2014	9/13/2014	Initial	Entire Permit	Initial Issuance

6. Emission Summary:

Pollutant	District Calculated Actual Emissions (tn/yr) 2013 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	0.0	No
NO_x	0.0	No
SO_2	0	No
PM_{10}	0.52	Yes
VOC	0.052	No

Pollutant	District Calculated Actual Emissions (tn/yr) 2013 Data	Pollutant that triggered Major Source Status (based on PTE)
Total HAPs	0.02	No
Single HAP	0.01	No

7. Applicable Requirements:

[ ] PSD	[X] 40 CFR 60	[X] SIP	[X] 40 CFR 63
[ ] NSR	[ ] 40 CFR 61	[X] District-Origin	[X] Other

8. MACT Requirements: The source has no future MACT requirements.

9. Referenced Federal Regulations in Permit:

40 CFR 61, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 80, Subpart I	Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel
40 CFR 89, Subpart B	Emission Standards and Certification Provisions
40 CFR 1039, Subpart B	Emission Standards and Related Requirements

II. Regulatory Analysis

1. Acid Rain Requirements: Ernst Kentucky, LLC – Downtown Plant is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements: Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Ernst Kentucky, LLC – Downtown Plant does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r): Ernst Kentucky, LLC – Downtown Plant does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District

Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.

4. 40 CFR Part 64 Applicability Determination: Ernst Kentucky, LLC – Downtown Plant, is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources*.

5. Basis of Regulation Applicability

a. **Plant-wide**

Ernst Kentucky, LLC – Downtown Plant is a potential major source for the pollutant PM_{10}. Regulation 2.17 – F*ederally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the criteria pollutants PM_{10} < 25 tn/yr, to be FEDOOP STAR Exempt as defined by Regulation 5.00, section 1.13.5. The source is not major for Greenhouse Gases.

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued shall submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.

b. **Emission Unit U1 –** Truck mix (dry) ready mix concrete batch plant

i. **Equipment:**

P/PE	Capacity	Install Date	Applicable Regulation	Basis for Applicability
E1: Aggregate Stockpiles	NA	8/28/08	1.14	Regulation 1.14 requires reasonable measures to prevent particulate particles airborne beyond the worksite.
E2: Sand Stockpile	NA	8/28/08		
E3: Aggregate handling	NA	8/28/08		
E4: Sand handling	NA	8/28/08		

P/PE	Capacity	Install Date	Applicable Regulation	Basis for Applicability
E5: Overhead aggregate bins loading	NA	8/28/08	2.17 7.08	Regulation 2.17 applies to a source taking a limit to be minor. Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
E6: Overhead sand bin loading	NA	8/28/08		
E7: Cement silo	50 tn	8/28/08		
E8: Flyash silo	50 tn	8/28/08		
E9: Aggregate weigh hopper	198 tn/hr	8/28/08		
E10: Cement/flyash weigh hopper	34.0 tn/hr	8/28/08		
E11: Truck loadout	240 tn/hr	8/28/08		
C1: Cement silo baghouse, Johnson Ross, model 6CP-500	1,771 cfm	8/28/08		
C2: Flyash silo baghouse, Johnson Ross, model 6CP-500	1,586 cfm	8/28/08		
C3: Cement/flyash weigh hoper baghouse, Johnson Ross, model 1 CP-H	196 CFM	8/28/08		
C4: Truck loadout baghouse, Besser, model DC5-260	1,596 cfm	8/28/08		

ii. **Standards/Operating Limits**

1) **PM/PM_{10}**

(a) Regulation 2.17, section 5.1, allows the source to set a synthetic limit below the major source threshold. Source requested a total plant-wide synthetic limit of less than twenty-five (25) tons in a 12 consecutive month period, for the pollutant PM_{10}.

(b) Regulation 1.14, section 2.1 requires the source to take precautions to prevent particulate matter from becoming airborne beyond the work site.

(c) Construction permit 226-09-C limits the emissions of the pollutant PM from the aggregate transfer conveyor to be less than or equal to 37.04 lb/hr.

(d) Construction permit 226-09-C limits the emissions of the pollutant PM from the sand transfer conveyor to be less than or equal to 35.49 lb/hr.

(e) Construction permit 226-09-C limits the emissions of the pollutant PM from the transit/mix truck loading to be less than or equal to 30.59 lb/hr.

(f) For emission points with a throughput greater than 30 tn/hr:

(i) The emission standard for PM at each emission point with a process throughput of greater than 30 tn/hr is determined in accordance with Regulation 7.08, section 3.1.2 as follows:

PM lb/hr limit = 17.31 (process weight tn/hr)$^{0.16}$

(ii) The PM emissions at the truck loadout exceeds the standard uncontrolled. The source is required to operate the baghouse dust collector at this point at all times truck loading occurs in order to show compliance with the Regulation 7.08 lb/hr PM standard.

(g) The emission standard for PM at each emission point with a process throughput of less than, or equal to, 30 tn/hr is determined in accordance with Regulation 7.08, section 3.1.2 as follows:

PM lb/hr limit = 3.59 (process weight tn/hr)$^{0.62}$

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

III. Other Requirements

1. Temporary Sources: The source did not request to operate any temporary facilities.

2. Short Term Activities: The source did not report any short term activities.

3. Emissions Trading: N/A

4. Operational Flexibility: The source did not request any operation flexibility.

5. Compliance History:

Incid. #	Date	Regulation Violated	Settlement
06625	3/1/13	Reg. 2.03, sec. 5.2, did not submit compliance report	Administrative Settlement

6. Calculation Methodology or Other Approved Method:

Concrete Batch Plant (U1): Emission factors from AP-42, Chapter 11.12, Concrete Batching, were used to determine Potential To Emit and confirm limits requested by the source.

7. Insignificant Activities

Equipment	Quantity	PTE (tpy)	Basis for Exemption
Brazing, soldering or welding equipment	1	0.41 PM	Reg. 1.02, Appendix A
Fixed or mobile internal combustion engine	1	2.5 NO_x	Reg. 1.02, Appendix A
2.1 mmbtu/hr natural gas fueled hot water heaters	1	0.9 NO_x	Reg. 1.02, Appendix A
Emergency Generator (IA1)	1	< 5.0 NO_x	Reg. 1.02
One (1) 2,000 gallon and one (1) 500 gallon diesel fuel tanks are deleted from the Insignificant Activities list due to their trivial emissions (PTE combined < 0.0015 tn/yr VOC)			

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2) Insignificant activities identified in District Regulation 1.02, Appendix A, shall comply with generally applicable requirements.

3) Activities identified in Regulation 1.02, Appendix A, may not require a permit and by insignificant with regard to application disclosure requirement but may still have generally applicable requirements that continue to apply to the source and must be included in the permit.

4) Emissions from Insignificant Activities shall be reported in conjunction

with the reporting of annual emissions of the facility as required by the District.

5) In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the pollutant Potential To Emit (PTE) quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment.

6) The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.

7) The owner or operator shall submit an updated list of insignificant activities whenever changes in equipment located at the facility occur that cause changes to the plant wide emissions.

8. IA Emission Units with Applicable Regulations

a. **Emission Unit IA1** – Emergency Generator

i. **Equipment**

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Emission Point	Description	Applicable Regulation	Basis for Applicability
IA1: Emergency Generator	Emergency diesel generators installed after July 11, 2005, and manufactured after April 1, 2006, with a maximum engine power less than or equal to 500 hp and located at an area source of HAP	40 CFR 60, Subpart IIII	40 CFR 60 Subpart IIII applies to manufacturers, owners or operators of new stationary compression ignition reciprocating internal combustion engines (RICE).
		40 CFR 63, Subpart ZZZZ	40 CFR 63 Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions.

ii. **Standards/Operating Limits**

1) **Unit Operation**

(a) 40 CFR §60.4202 and §60.4205 establish emission standards for the owner or operator or manufacturer of the emergency stationary CI RICE.

(b) 40 CFR §60.4211 establishes unit operation requirements for emergency stationary CI RICE.

2) **Fuel Requirements**

40 CFR §60.4207 establishes the requirements for nonroad

diesel fuel.

iii. **Monitoring and Record Keeping**

Unit Operation

40 CFR §60.4209(a) and §60.4214(b) establish monitoring and record keeping requirements for emergency stationary CI RICE.

iv. **Reporting**

Unit Operation

40 CFR §60.4214 establishes reporting requirements for emergency stationary CI RICE.

v. **Testing**

40 CFR §60.4212 establishes testing requirements for emergency stationary CI RICE.